



## Hookworm Infestation in Infant : A Rare Case Report

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### ABSTRACT

Hookworm infestation is common but has rarely been reported in neonates or infants. We reported a case of hookworm infestation by *Necator americanus* in a four months old male baby, presented with melena and respiratory distress. Clinically the baby was severely anemic. Stool examination revealed egg of hookworm and adult *Necator americanus*.

### KEYWORDS

Infant malena *Necator americanus*.

*Ancylostoma duodenale* and *Necator americanus* are the main nematodes causing hookworm infection in man. Almost eradicated from Europe and the USA, hookworm infection is still seen in warm, moist climates in tropical and subtropical regions (1).

Hookworm infection is widely prevalent in India. More than 200 million people are estimated to be infected in India. *Necator americanus* is predominant in South India and *Ancylostoma duodenale* in North India.

Hookworm infection usually occurs in children when they begin to crawl or walk bare foot and come in contact with contaminated soil. Infants are rarely exposed to this infection (2).

### Case history

A four months old male baby who was brought by parents with complaint of passing black coloured stools since seven days and respiratory distress. He had vomiting 2-3 times. On clinical examination general condition was poor. He was severely anemic with marked tachycardia and systolic murmur. He also had tachypnea. Local examination showed hypo pigmentation and multiple ulcers over buttocks and right lower limb.

Laboratory tests revealed hemoglobin 2 gm %, TLC-16,000/cumm, with differential of P-28, L-36, E-30, M-6. PBS showed microcytic hypochromic anemia. First stool microscopy was negative for ova and cyst. Stool for occult blood was positive. Initially diagnosis was anemia with melena with unknown cause. The patient was differentially diagnosed as hemolytic disease of newborn, aplastic anemia, congenital spherocytosis and also suspected of Meckel's diverticulum and rectal polyp. Stool microscopy was repeated twice after two days and revealed egg of hookworm.

The infant was treated with two blood transfusions and syrup albendazole 400 mg HS for three days. Infant passed thread-like small worms in stool which were identified as *Necator americanus*. After that baby's hemoglobin was found to be

8.2 gm %. Skin lesions were found to be in healing stage. Mother's stool examination was negative for ova and cyst.

### Discussion

Most of the cases of infantile hookworm disease have been reported from China with the exception of a single identified as *Necator americanus*, all adult worms examined were *Ancylostoma duodenale* (3). Infantile hookworm disease was also reported Nepal, North Bihar and Delhi (1,4). Transmission of hookworm infection in infants can occur from contaminated soil by penetration of the skin by filariform larvae of hookworm, if infants lie bare skin on the soil, or from infected mothers through milk during breast feeding and rarely through placenta. In the present case mode of transmission was through the contaminated soil, considering the low socio-economic status of family and skin lesions over buttocks and right lower limb. As well as the adult worm identified was *Necator americanus*, in which transmission through only skin is mentioned.

This case indicates that there is need for increased awareness by the clinicians to recognise infantile hookworm disease in young infants coming from low socioeconomic families, having poor environmental hygiene and sanitation presenting with severe anemia and melena. All such infants should be subjected to repeated stool examination before proceeding to more invasive diagnostic tests (5,6).

Socioeconomic improvement is vital to get rid of the problem of infantile hookworm disease. Banning of using human excreta as manure, health education about the problem associated with open field defecation, advice of using protective shoes, use of sanitary latrines and regular deworming are needed.

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